DOINGWHATWORKS

Audio

FULL DETAILS AND TRANSCRIPT

Formative Assessment on a Daily Basis

Claxton Middle School, Georgia • May 2008

Topic: National Math Panel: Critical Foundations for Algebra
Practice: Mastery Framework

Highlights

- Different types of informal assessment used daily
- Six elements of an effective math lesson (drill, review, instruction, processing, application, homework)
- How teachers work assessments into each of the six elements of the lesson
- Tennessee Instructional Method (I Do, We Do, You Do)
- Different types of practice
- Purpose of homework
- "Ticket-out-the-door" closure along with examples
- Philosophy of 100% error correction

About the Site

Claxton Middle School

Claxton, GA

Demographics

47% Black

41% White

12% Hispanic
75% Free or Reduced-Price Lunch
4% English Language Learners
17% Special Education

Claxton has implemented strategies geared toward ensuring that students receive intensive support to master skills including:

- Hands-on practical demonstrations and activities that engage students who are struggling with mathematics,
- Praise-prompt-leave strategy for encouraging struggling students,
- Various types of informal assessments in daily use,
- Consistent use of the six elements of an effective mathematics lesson and Tennessee Instructional method,
- Philosophy of 100% correction of mistakes,
- Four-tier pyramid of interventions and technology-based prescriptive remediation,
- Fluid movement of students across supports based on frequent assessments, and
- Daily 90-minute period for re-teaching of mathematics

Full Transcript

My name is Melissa Gardner. I am a 7th grade math teacher at Claxton Middle School. At Claxton Middle School, our math department uses several different types of formative assessment throughout the day. On a daily basis, we use warm-ups, "tickets-out-the-door," teacher observations which include walking around the room, monitoring student work. We also use a classroom performance system and quizzes to assess mastery of a skill. We look for students to be showing their work. We also look for common mistakes and/or misconceptions, because we found that if one student has a misconception, usually there are two or three more that have the same misconception.

We use a strategy called the "Six Elements of an Effective Math Lesson." The six elements are drill, review, instruction, processing, application, and homework. And we have found a way to work formative assessments into each of the Six Elements of an Effective Math Lesson. All math teachers at Claxton Middle School use this framework. We have a hundred minute lesson. We start the lesson off with a drill. The drill is short speed drills, the purpose of gaining speed and fluency over basic facts -- things that should be committed to memory. They are very quick; they are very informative to teachers. In the beginning of the year, we start with simple things like multiplication facts, addition, subtraction, division; and throughout the year, we move to things such as percent, decimal, fraction recognition, measurement, conversions, one-step equations.

The second step of our six elements is review; and we work the warm-up in as our formative assessment. It keeps old learning firm, it keeps steps and processes fresh, and it maintains and promotes accuracy. Students are seeing review problems on the warm-ups; they are practicing lessons from the previous day or the previous few days. I have used the warm-up to assess inequalities by placing four to five problems of adding and subtracting to solve inequalities; and after the students have been given time to complete the warm-up, the teachers have been monitoring, walking around the room, assessing during the warm-up. And then after the warm-up, we use popsicle sticks to call on students to come to the SMARTboard and work the warm-up; and we correct them if they are making any mistakes, or praise them if they are on the right track, and just work the problem and the process together.

During the instruction piece of our lesson, which is the majority of the 100 minutes, we use the Tennessee Instructional Method— the "I do, We do, You do." During the "I do" step, the teacher does all the work. Students' pencils are flat on their desks, they are not writing, they are completely paying attention: We work through all the steps. During the "We do" section," they actually pick up their pencil, they work through the problem with the teacher: They offer some assistance, but most of the teaching is still on the teacher. During the "You do," the teacher's pencil is down and the students are doing the work, and the teacher is walking around and monitoring and answering questions and checking processes. During the Processing part—we call that the "soak it in" piece—this is where students practice, practice, practice. We use marker boards; we use cooperative groups; we use animations on our classroom software, that came with our textbooks that are game-type things that are very age-appropriate and help build skills. We also use eWorkbooks from that same website. During the Application piece, this is where we make the math really meaningful. Together as a group, we come up with how we would use this outside of the classroom. The final piece of our six elements is homework: We keep it short. We make sure that it focuses on the day's lesson. It is not used to preview the next day's lesson. We never put anything new on homework. Homework always comes from what we have done that day in class, and if we assign it we always check for completeness.

We use a summarizing activity from Max Thompson's Focused Learning Schools called the "ticket-out-the-door," and it's just one or two short questions derived from that day's lesson. It matches the key question and all the students work the one or two problems, and turn them in on their way out the door. And after the class leaves, the teacher knows who needs some review tomorrow and who needs to clear up any misconceptions the next day. An example of a "ticket-out-the-door" I have recently used in my math class would be, if my lesson was on cross-sections, a "ticket-out-the-door" question could be: "A set of my parallel cross-sections are similar, but not congruent circles. What solid am I?" And the students would just, you know, write the short, simple answer.

At Claxton Middle School, we have a philosophy that encourages students to correct 100% of their errors. We believe in this philosophy, because of the struggle involved. We believe that the struggle involved in making corrections, it provides the students with a better understanding. It really makes them think, and it gives them a chance to continue to learn and work with guided instruction.